DETAILED ESTIMATE

For the Work of

"Improvements And Restoration Of Roads At Palanahalli Roads And Palanahalli Roads And Palanahalli Thota Roads Of Palanahalli Village And Other Roads In Ward No.05 Byatarayanapura Sub Division"

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- IMPROVEMENTS AND RESTORATION OF ROADS AT PALANAHALLI ROADS AND PALANAHALLI ROADS AND PALANAHALLI THOTA ROADS OF PALANAHALLI VILLAGE AND OTHER ROADS IN WARD NO.05 BYATARAYANAPURA SUB DIVISION

								Estimation Cost.Rs	10000000.00
Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications(P.No-143 &136 ,I No-19.1&17.4& 17.1) 5km lead= 57+2.0x1.28x5 =69.80								
	Drain Desilting								
	BS slab of Drain								
	Anand Nagar								
	Cross Road-1 (W0101)	Cum	1	100.00	0.45	0.45	20.25		
	CC Drain								
	Anand Nagar								
	Cross Road-1 (W0101)	Cum	1	100.00	0.50	0.45	22.50		
	1st Cross Road (W0097)	Cum	1	90	0.50	0.50	22.50		
	Defence Layout Ph-1								
	8th Main Road (W0088)	Cum	2	143.00	0.50	0.50	71.50		
	6th Main Road (W0153)	Cum	2	124.00	0.50	0.50	62.00		
	Drain								
	Palanahalli School Road (W0161)	Cum	2	156.00	1.10	0.90	308.88		
	Cross Road	Cum	2	95.00	1.10	0.90	188.10		
	Culvert								
	Palanahalli School Road (W0161)	Cum	1	5.00	1.40	0.95	6.65		
		Cum	2	6.00	1.40	0.95	15.96		
	Basic rate	130.00							
	Area weightage 6%	7.80							
	5Km lead & Lift= 57+(2*1.28*5)	69.80							
	Sub Total	**207.60**							
	Total						**718.34**	**207.60**	**149127.00**
2	**Removing and refixing** stone slabs of drains and pointing in CM (1:3) (P.No-27,I No-5.33)								
	BS slab of Drain								
	Open Drain (Sides & Bottom)		Width=Perimeter of Drain in U Shape						
	Anand Nagar								
	Cross Road-1 (W0101)	Sqm	1	100.00	1.35		135.00		
					Total		**135.00**		
	Deduct 30% for Missing/Damaged						**40.50**		
	Consider 70% Qnty for Removing & Refixing						**94.50**		

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	Precast Cover Slab								
	Anand Nagar								
	Cross Road-1 (W0101)	Sqm	1	100.00	0.90		90.00		
	1st Cross Road (W0097)	Sqm	1	90.00	0.90		81.00		
	Defence Layout Ph-1								
	8th Main Road (W0088)	Sqm	2	143.00	0.90		257.40		
	6th Main Road (W0153)	Sqm	2	124.00	0.90		223.20		
					Total		**651.60**		
	Deduct 30% for Missing/Damaged						**195.48**		
	Consider 70% Qnty for Removing & Refixing						**456.12**		
	Basic rate	105.00							
	Area weightage 6%	6.3							
	Sub Total	**111.30**							
	Total						**550.62**	**111.30**	**61285.00**
3	Providing granite slabs of selected quality roughly dressed havinf a size of 7.5cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete.(P.No.27,I.No.5.31.1)								
		From item no.1							
	Provide30% new BS Slab for Missing/Damaged	Sqm					**40.50**		
	Basic rate	700.00							
	Area weightage 6%	42							
	Sub Total	**742.00**							
	Total						**40.50**	**742.00**	**30051.00**
4	KSRB 4-1.3 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.13, I.No. 4.3)								
	For Drain								
	Palanahalli School Road (W0161)	Cum	2	156.00	1.10	0.15	51.48		
	Cross Road	Cum	2	95.00	1.10	0.15	31.35		
	For Culvert								
	Palanahalli School Road (W0161)	Cum	1	5.00	1.40	0.15	1.05		
		Cum	2	6.00	1.40	0.15	2.52		
	Basic rate	5301.69							
	Area weightage 6%	318.10							
	Sub Total	**5619.79**							
	Total						**86.40**	**5619.79**	**485550.00**

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
5	Providing laying plain/ reinforced cement concrete for side Drains Using M20 nominal mix Concrete with OPC at 300kgs.With 20mm and Down size granite metal coarse aggregate at 0.69cum and fine aggregate at 0.43cum Machne mixed, well compacted for wall and Bottom including centering shuttering,cost of materials,HOM of Machinery,Curing Etc.,Complete Excluding cost of Steel as per morth MORTH specification No. 1500, 1700, 2200. Including Cost of material, Labour, HOM complete as per Specification-WALL & Bottom thickness 15Cm(Item No 37.59.2 page no 271)								
	Drain								
	Bottom Raft								
	Palanahalli School Road (W0161)	Cum	2	156.00	0.90	0.15	42.12		
	Cross Road	Cum	2	95.00	0.90	0.15	25.65		
	Side Wall								
	Palanahalli School Road (W0161)	Cum	4	156.00	0.15	0.60	56.16		
	Cross Road	Cum	4	95.00	0.15	0.60	34.20		
					Sub Total		**158.13**		
	Culvert								
	Bottom Raft								
	Palanahalli School Road (W0161)	Cum	1	5.00	1.20	0.20	1.20		
		Cum	2	6.00	1.20	0.20	2.88		
	Side Wall								
	Palanahalli School Road (W0161)	Cum	2	5.00	0.20	0.60	1.20		
		Cum	4	6.00	0.20	0.60	2.88		
					Sub Total		**8.16**		
	Basic rate	7002.82							
	Area weightage 6%	420.17							
	Sub Total	**7422.99**							
	Total						**166.29**	**7422.99**	**1234368.00**
6	KSRB M2200-6 Providing T.M.T bars Fe 500 steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. MORTH Specification NO.1600&2200Specification No. Pg No.229 Item No.28.8.2								
	For Drain	Cum	From item no. 5				158.13		
		kg	Steel assumed 60Kg/Cum of Concrete				9487.80		
		tonne					**9.49**		
	For Culvert	Cum	From item no.5				8.16		
		kg	Steel assumed 90 Kg/Cum of Concrete				734.40		
		tonne					**0.73**		
	Basic rate	75610							
	Area weightage 6%	4536.6							
	Sub Total	**80146.60**							
	Total						**10.22**	**80146.60**	**819274.00**

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
7	Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and Finishing cutting ,including form work,curing,including cost of alll materials, labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc ,copmplete. (Data Rate)								
	Provide30% Slab for Missing/Damaged	From item no.3					**195.48**		
	New Drain Cover slab								
	Palanahalli School Road (W0161)	Sqm	2	156.00	0.90		280.80		
	Cross Road	Sqm	2	95.00	0.90		171.00		
	Data rate	**1922.00**							
	Total						**647.28**	**1922.00**	**1244073.00**
8	Providing and Fixing pre cast **covering Slab 250mm thick** made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge								
	Culver cover Slab								
	Palanahalli School Road (W0161)	Sqm	1	5.00	1.20		6.00		
		Sqm	2	6.00	1.20		14.40		
	Data rate	**5418.00**							
	Total						**20.40**	**5418.00**	**110528.00**
9	KSRRB M300-14. **Excavation for roadwork in all types of soil** by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications MORTH Specificatio MORTH Specification No.301Loading and unloading with 5km lead= (I No-19.14,P No-143)								
	Road Cut Portion								
	Cross Road	Cum	1	520.00	1.30	0.20	135.20		
	Basic rate	41.00							
	Area weightage 6%	2.46							
	5Km lead= (2*1.28*5)	12.80							
	Sub Total	**56.26**							
	Total						**135.20**	**56.26**	**7607.00**
10	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications. MORTH / Chapter 3(P.No.146, I.No.19.56)								
	Anand Nagar								
	Cross Road-1 (W0101)	Sqm	1	100.00	5.20		520.00		
	1st Cross Road (W0097)	Sqm	1	90.00	5.50		495.00		
	Defence Layout Ph-1								
	8th Main Road (W0088)	Sqm	1	143.00	4.80		686.40		
	6th Main Road (W0153)	Sqm	1	124.00	5.20		644.80		
	Cross Road-1 (W0086)	Sqm	1	38.00	4.50		171.00		
	Cross Road-2 (WA088)	Sqm	1	34.00	4.40		149.60		
	Basic rate	39.00							

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
	Area weightage 6%	2.34							
	Sub Total	**41.34**							
	Total						**2666.80**	**41.34**	**110245.00**
11	KSRRB 300-58. **Compaction of original ground** by mechanical means including filling in depression occuring during rolling including cost of all labour, HOM complete as per specifications.(I No-19.64,P No-147)								
	Anand Nagar								
	Cross Road-1 (W0101)	Sqm	1	100.00	5.20		520.00		
	1st Cross Road (W0097)	Sqm	1	90.00	5.50		495.00		
	Defence Layout Ph-1								
	8th Main Road (W0088)	Sqm	1	143.00	4.80		686.40		
	6th Main Road (W0153)	Sqm	1	124.00	5.20		644.80		
	Cross Road-1 (W0086)	Sqm	1	38.00	4.50		171.00		
	Cross Road-2 (WA088)	Sqm	1	34.00	4.40		149.60		
	Basic rate	6.00							
	Area weightage 6%	0.36							
	Sub Total	**6.36**					**2666.80**	**6.36**	**16961.00**
	Total								
12	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)								
	Road								
	Anand Nagar								
	Cross Road-1 (W0101)	Cum	1	100.00	5.20	0.20	104.00		
	1st Cross Road (W0097)	Cum	1	90.00	5.50	0.20	99.00		
	Defence Layout Ph-1								
	8th Main Road (W0088)	Cum	1	143.00	4.80	0.20	137.28		
	6th Main Road (W0153)	Cum	1	124.00	5.20	0.20	128.96		
	Cross Road-1 (W0086)	Cum	1	38.00	4.50	0.20	34.20		
	Cross Road-2 (WA088)	Cum	1	34.00	4.40	0.20	29.92		
	Road Cut Portion								
	Cross Road	Cum	1	520.00	1.30	0.20	135.20		
	Basic rate	1888.00							
	Area weightage 6%	113.28							
	Sub Total	**2001.28**					**668.56**	**2001.28**	**1337976.00**
	Total								
13	KSRRB M500-6. Providing and applying **primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)								

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Anand Nagar								
	Cross Road-1 (W0101)	Sqm	1	100.00	5.20		520.00		
	1st Cross Road (W0097)	Sqm	1	90.00	5.50		495.00		
	Defence Layout Ph-1								
	8th Main Road (W0088)	Sqm	1	143.00	4.80		686.40		
	6th Main Road (W0153)	Sqm	1	124.00	5.20		644.80		
	Cross Road-1 (W0086)	Sqm	1	38.00	4.50		171.00		
	Cross Road-2 (WA088)	Sqm	1	34.00	4.40		149.60		
	Cross Road	Sqm	1	520.00	1.30		676.00		
	Basic rate	32.00							
	Area weightage 6%	1.92							
	Sub Total	**33.92**							
	Total						**3342.80**	**33.92**	**113388.00**
14	KSRRB 500-2.Cleaning the existing black topped surface with brooms,soft brushes and finally dusting with old gunny bags and/or compressed air to receive bituminous treatment including cost of all materials,labhour, HOM of machineries complete as per specifications.(P.No.158,I.No.21.2).								
	Cross Road	Sqm	1	520.00	5.50		2860.00		
	Basic rate	5.00							
	Area weightage 6%	0.3							
	Sub Total	**5.30**							
	Total						**2860.00**	**5.30**	**15158.00**
15	KSRRB 500-11. Providing and laying bituminous macadam on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixed material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by smooth wheeled, vibratory & tandem rollers to achieve the desired density, but excluding cost of primer / tack coat including lead, lift and cost of all materials, labour, HOM of machineries complete as per specifications. MORTH /Chapter 5 - using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 3.4 % VG-30 Bitumen(P.No.159,I.No.21.11.6).								
	Anand Nagar								
	Cross Road-1 (W0101)	Cum	1	100.00	5.20	0.05	26.00		
	1st Cross Road (W0097)	Cum	1	90.00	5.50	0.05	24.75		
	Defence Layout Ph-1								
	8th Main Road (W0088)	Cum	1	143.00	4.80	0.05	34.32		
	6th Main Road (W0153)	Cum	1	124.00	5.20	0.05	32.24		
	Cross Road-1 (W0086)	Cum	1	38.00	4.50	0.05	8.55		
	Cross Road-2 (WA088)	Cum	1	34.00	4.40	0.05	7.48		
	Cross Road	Cum	1	520.00	1.30	0.05	33.80		
	Basic rate	5533.00							
	Area weightage 6%	331.98							

Sl No	Description of work	Unit	Mesurement				Qty	Rate	Amount
			No.	L	B	D			
	Sub Total	**5864.98**							
	Total						**167.14**	**5864.98**	**980272.00**
16	KSRRB 500-7. Providing and **applying tack coat** using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-161,I No-21.7)								
	Anand Nagar								
	Cross Road-1 (W0101)	Sqm	1	100.00	5.20		520.00		
	1st Cross Road (W0097)	Sqm	1	90.00	5.50		495.00		
	Defence Layout Ph-1								
	8th Main Road (W0088)	Sqm	1	143.00	4.80		686.40		
	6th Main Road (W0153)	Sqm	1	124.00	5.20		644.80		
	Cross Road-1 (W0086)	Sqm	1	38.00	4.50		171.00		
	Cross Road-2 (WA088)	Sqm	1	34.00	4.40		149.60		
	Cross Road	Sqm	1	520.00	5.50		2860.00		
	Basic rate	12.00							
	Area weightage 6%	0.72							
	Sub Total	**12.72**							
	Total						**5526.80**	**12.72**	**70301.00**
17	KSRRB M500-19. Providing and laying **bituminous concrete** using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 507 of MORTH V revision using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-ll (30 mm to 45 mm) with 5.4% VG-30 Bitumen(P.No-162,I No-21.22.6)								
	Anand Nagar								
	Cross Road-1 (W0101)	Cum	1	100.00	5.20	0.04	20.80		
	1st Cross Road (W0097)	Cum	1	90.00	5.50	0.04	19.80		
	Defence Layout Ph-1								
	8th Main Road (W0088)	Cum	1	143.00	4.80	0.04	27.46		
	6th Main Road (W0153)	Cum	1	124.00	5.20	0.04	25.79		
	Cross Road-1 (W0086)	Cum	1	38.00	4.50	0.04	6.84		
	Cross Road-2 (WA088)	Cum	1	34.00	4.40	0.04	5.98		
	Cross Road	Cum	1	520.00	5.50	0.04	114.40		
	Basic rate	7972.00							
	Area weightage 6%	478.32							
	Sub Total	**8450.32**							
	Total						**221.07**	**8450.32**	**1868129.00**

Sl No	Description of work	Unit	Mesurement No.	L	B	D	Qty	Rate	Amount
18	KSRRB M800-13.**Road Marking with Hot Applied Thermoplastic Compound** with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)								
	Anand Nagar								
	Cross Road-1 (W0101)	Sqm	2	100.00	0.10		20.00		
	1st Cross Road (W0097)	Sqm	2	90.00	0.10		18.00		
	Defence Layout Ph-1								
	8th Main Road (W0088)	Sqm	2	143.00	0.10		28.60		
	6th Main Road (W0153)	Sqm	2	124.00	0.10		24.80		
	Cross Road-1 (W0086)	Sqm	2	38.00	0.10		7.60		
	Cross Road-2 (WA088)	Sqm	2	34.00	0.10		6.80		
	Cross Road	Sqm	2	520.00	0.10		104.00		
	Basic rate	429.00							
	Area weightage 6%	25.74							
	Sub Total	**454.74**							
	Total						**209.80**	**454.74**	**95404.00**
								Grand Total	**8749697.00**
								GST Charges (12% of estimated cost)	**1049963.00**
								DPR Charges (1% of estimated cost)	**100000.00**
								Project management And Consultancy Charges(1% of estimated cost)	**100000.00**
								Miscellenious and rounding	**340.00**
								Total Amount	**10000000.00**
								RUPEES ONE CRORE ONLY	

CERTIFICATE:

1) The work spot has been inspected and found to be necessary
2) The work spot comes under B.B.M.P
3) The provisions made in the estimate are necessary and minimum
4) The estimate is based on C.S.R of 2018-2019,Issue rates and Data Rates.

Assistant Engineer
BBMP

Assistant Executive Engineer
BBMP

Executive Engineer
BBMP

RUDRAPRASAD CONSULTANTS
BANGALORE